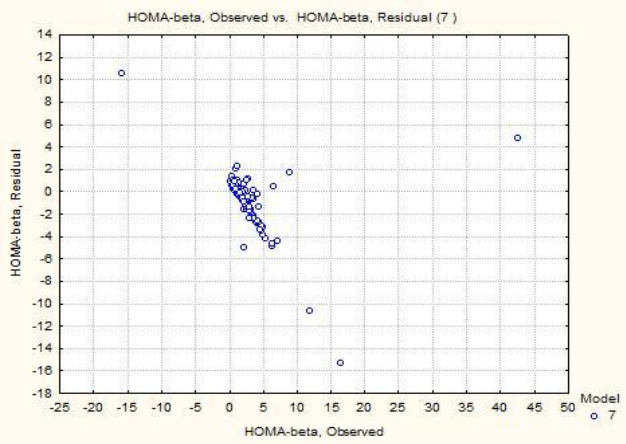
05-2011

ES Complex clinical investigation: β function decreased Screening test (as reference HOMA-β < 1.55): Correlation/ Specificity and Sensitivity

Chaim E. A and Gobato R.C. New Approach from physiological data Algorithms for pre diabetes and diabetes screening in an obese patient's population to use on a larger scale. Unicamp University 2011.

Results for patients BMI > = 30 Neural Network

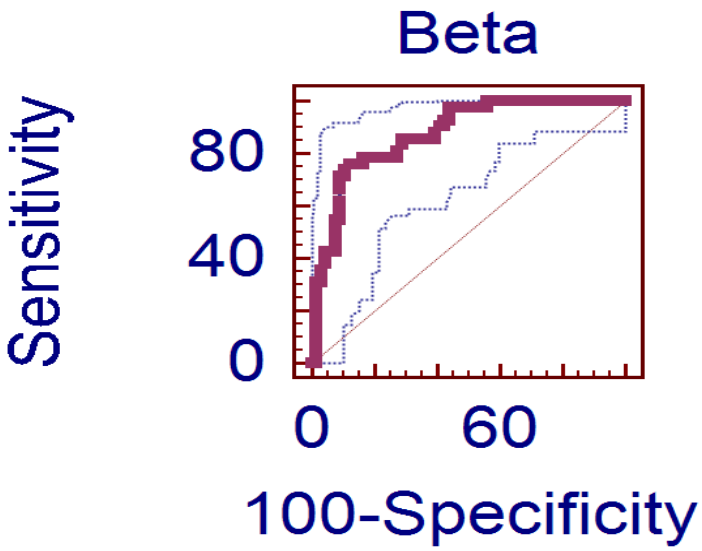


	Regression (7) HOMA-beta.7
Data Mean	1.506757
Data S.D.	2.832232
Error Mean	-0.005664
Error S.D.	1.594476
Abs E. Mean	0.852972
S.D. Ratio	0.562975
Correlation	0.831498

The correlation between HS-β (HS-Beta cell) and HOMA-β (HOMA-Beta cell) was r=0.83 (p < 0.0001).

Results for patients BMI< 30 Beta = SDNN/*SI

Coefficient Age/gender



Variable	Beta
Classification variable	diagnosis

Sample size	108
Positive group : diagnosis = 1	42
Negative group : diagnosis = 0	66

Disease prevalence (%)	38.9

Area under the ROC curve (AUC)	0.874
Standard Error [a]	0.0335
95% Confidence Interval [b]	0.796 to 0.930
z statistic	11.174
Significance level P (Area=0.5)	<0.0001

[a] DeLong et al., 1988
[b] Binomial exact

Sensitivity 76.19 % Specificity 87.88% Cutoff < 4.46